The Personal Record Keeping Command Module brings you the convenience and simplicity of a computer-based filing system. Without programming experience or special training, you can easily create, maintain, and utilize your own customized files. The variety of applications can range from small library management to household inventory, from stock and bond records to sports statistics, from teacher's grade book records to real estate listings.

Personal Record Keeping features help you

- Organize and set up customized files
- Update and rearrange files
- Display selected lists of file data
- Analyze relationships between items
- Evaluate simple statistics
- Save your file data on a mass storage device
- Make printed copies of your file or of selected data from the file
- Transmit files to another Home Computer via the RS232 Interface and TI Modem

Adds 24K bytes of active memory with stored program to your TI Home Computer

Command Module program and data base contents
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TEXAS INSTRUMENTS
INCORPORATED

Printed in U.S.A.

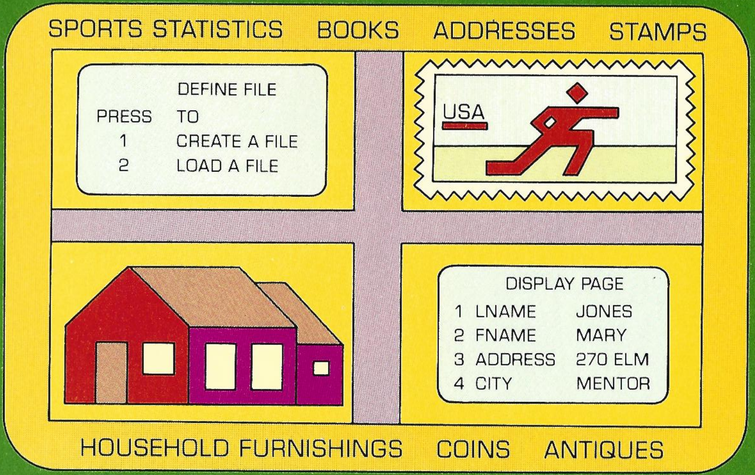
Texas Instruments Home Computer

Personal Record Keeping

SOLID STATE
SOFTWARE™

COMMAND MODULE

A step-by-step guide to creating, maintaining and utilizing your own computer-based filing system. Useful and convenient for a variety of applications.



```
        DEFINE FILE
PRESS   TO
  1     CREATE A FILE
  2     LOAD A FILE
```

```
      DISPLAY PAGE
1 LNAME      JONES
2 FNAME      MARY
3 ADDRESS    270 ELM
4 CITY       MENTOR
```

This module requires use of an audio cassette deck or other storage accessory — not included (details inside).

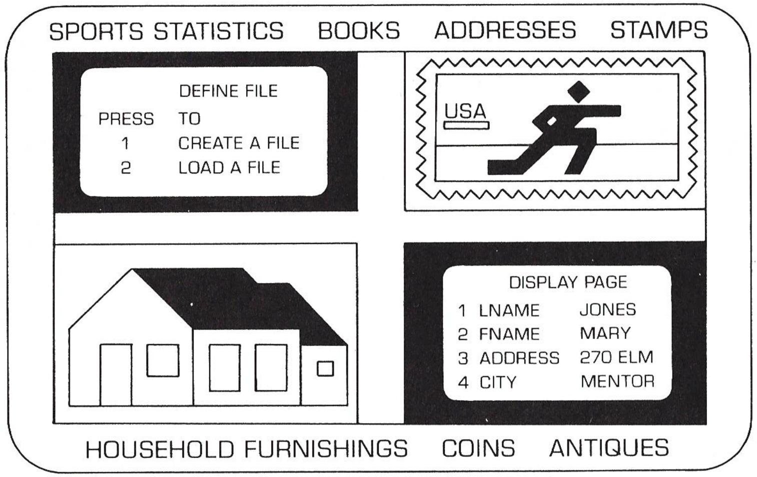
Quick Reference Guide

Note that the key sequences required to access special functions depend on the type of computer console you have. Important keystroke sequences are summarized here for your "quick reference."

TI-99/4	*TI-99/4A*	
ENTER	**ENTER**	Enters keyboard input into program. Each time you press **ENTER**, the cursor moves to the next item or page.
SHIFT A (AID)	**FCTN 7 (AID)**	Activates the SEARCH FOR A PAGE option. A message on the screen tells you when this function is active.
SHIFT V (PROC'D)	**FCTN 6 (PROC'D)**	Activates the Command Mode. Then, a screen message tells you to press the arrow keys to review pages or **P** to print a page.
SHIFT R (REDO)	**FCTN 8 (REDO)**	Returns to the beginning of the current display. This function key is useful in correcting errors.
SHIFT Z (BACK)	**FCTN 9 (BACK)**	Returns to the previous selection list or index or leaves the Command Mode.
SHIFT Q (QUIT)	**FCTN = (QUIT)**	Interrupts the program and returns to the master title screen. *Note:* All data in the computer's memory is erased.

TEXAS INSTRUMENTS
HOME COMPUTER

Personal Record Keeping



This *Solid State Software*™ Command Module is designed to be used with the Texas Instruments Home Computer. Its preprogrammed solid-state memory expands the power, versatility, and capability of your Home Computer.

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See important warranty information at back of book.

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INTRODUCTION

Have you ever kept a file of index cards with hopes of organizing a collection of facts in an orderly, useful fashion? In concept it seems simple. In practice, however, you know how difficult it is to organize and update a paper-based filing system. The Personal Record Keeping *Solid State Software*™ Command Module offers you a fast, easy method of creating, maintaining, and utilizing your own customized files. You can use this module for applications that range from small library management to household inventory, from stock and bond records to sports statistics, from stamp collections to science experiments. The variety of applications is limited only by your imagination.

Without programming experience or special training, you can use the module to:

- Organize and set up customized files
- Update and rearrange files
- Display selected lists of file data
- Analyze relationships between items
- Evaluate simple statistics

The Personal Record Keeping module prompts you through the procedure of setting up a file. Once your file structure is established, the computer again prompts you through the procedure of entering information into the file. Then, with a few simple keystrokes, you can update your file or "pull" needed information. It's that easy!

File contents can be stored for future use on an external mass storage medium such as a cassette tape or disk. Stored files are easily loaded into the computer for further analysis. (*Note*: An external mass storage device is necessary to effectively utilize the Personal Record Keeping module. See "Storing Data," page 31.)

You can transmit data files to another Home Computer via the Texas Instruments RS232 Interface and the Texas Instruments Telephone Coupler (Modem). With this capability, you can update business files in branch offices, exchange file information with other Home Computer users, or transmit files for many other purposes.

With the optional Texas Instruments Solid State Thermal Printer (or another printer connected via the RS232 Interface), you can make printed copies of your files or of selected data from your files. These can be printed page by page or in a special report format.

In addition, the data-organizing structures of the Personal Record Keeping Command Module and the Statistics Command Module are designed to be compatible. Applying the capabilities of one of these modules to data generated from the other can increase the usefulness of both by accomplishing tasks which are not possible with either module used alone. See "Statistics Module Compatibility" in this manual for additional details. You may also wish to ask your retailer to let you review the owner's manual for the Statistics Command Module.

USING THIS MANUAL

This manual is organized to make the options available in the Personal Record Keeping module easy to explore. First, briefly review the section, "Special Keys and Features," to aquaint yourself with the operation of the module.

Many of the module features are discussed in a mailing list example which takes you through the basic procedures of structuring a file and entering data into the file. You then use that data to explore some of the module operations. Other features of the module are discussed in separate sections of the manual. The various module selections are reviewed in "Module Organization" which provides a brief overview of the module options.

An easy way to familiarize yourself with the module's capabilities is to try out the examples as you read the manual. This procedure will give you practice before you begin setting up your own files.

SPECIAL KEYS AND FEATURES

The following keys and features are used in the Personal Record Keeping Module:

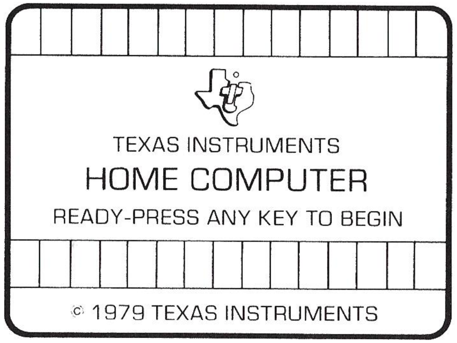
ENTER	Enters keyboard input in program memory. Each time you press **ENTER**, the cursor moves to the next item or page.
CURSOR	The screen shows a flashing symbol (cursor) to tell you when and where to type information for the computer.
AID	Activates the SEARCH FOR A PAGE option. A message on the screen tells you when this function is active.
PROC'D	Activates the Command Mode. A screen message tells you to press the arrow keys to review pages or to press **P** to print a page.
UP ↑ **DOWN** ↓	Reviews the next (↑) or previous (↓) page.

P	Activates the print function to print the page displayed on the screen.
REDO	Returns to the beginning of the current display. This function key is useful in correcting errors.
BACK	Returns to the previous selection list or index or leaves the Command Mode.
LEFT ← **RIGHT** →	Moves the cursor one space to the left or right without erasing or changing the characters on the screen.
DEL	Deletes the character under the cursor. The remainder of the line is shifted left.
INS	Lets you insert a new character in front of the character under the cursor. When you type the new character, the rest of the line is shifted right to allow space.
CLEAR	Clears the entry you are typing.
QUIT	Interrupts the module program and returns to the master title screen. All data in the computer's internal memory is erased.

USING THE *SOLID STATE SOFTWARE*™ COMMAND MODULE

An automatic reset feature is built into the computer. When a module is inserted into the console, the computer returns to the master title screen. All data or program material you have entered will be erased.

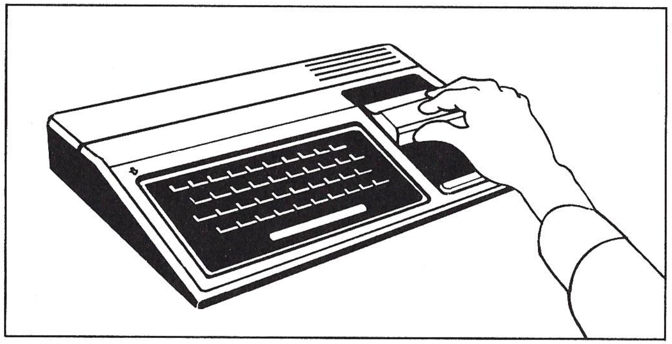
Note: Be sure the module is free of static electricity before plugging it into the console (see page 46).



```
TEXAS INSTRUMENTS
HOME COMPUTER
READY-PRESS ANY KEY TO BEGIN

© 1979 TEXAS INSTRUMENTS
```

1. Turn the computer on and wait for the master title screen to appear. Then slide the module into the slot on the console.



2. Press any key to make the master selection list appear. The title of the module will be on the list. To select the module, press the key for the number next to PERSONAL RECORDS.

(*Note*: To remove the module, first return the computer to the master title screen by pressing **SHIFT Q**. *Then* remove the module from the slot. If you have any problem inserting the module, or if it is accidentally removed from the slot while in use, please see "In Case of Difficulty" on page 47.)

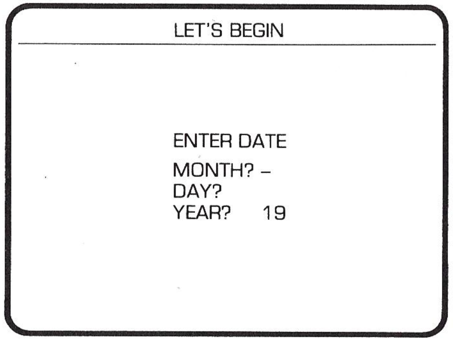
MAILING LIST EXAMPLE

When you press the key to select the module, the Personal Record Keeping title screen appears, followed by the message, ONE MOMENT PLEASE.

To help you get started, we've included a sample mailing list example in this manual. As you go through this simple example, you'll work with many of the features of the module and experience the convenience and simplicity of a computer-based filing system.

Before you begin setting up the file, the computer asks for some preliminary information.

First, you are asked to enter today's date.



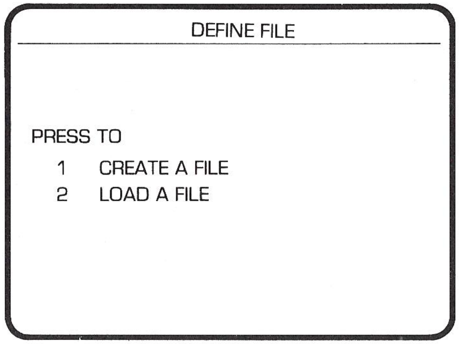
```
LET'S BEGIN

ENTER DATE
MONTH? –
DAY?
YEAR?     19
```

Type in the month, day, and year in numerical form, pressing **ENTER** after each entry.

Then, you are asked if a printing device will be used. For this example, press **N** for no. (See page 34 for an explanation of the printing capabilities of this module.)

The next display gives you two options.



DEFINE FILE

PRESS TO
1 CREATE A FILE
2 LOAD A FILE

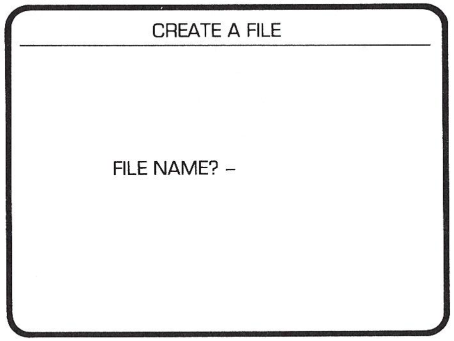
Press **1** to CREATE A FILE since you are setting up a new file. (Pressing **2** allows you to enter an existing file that has been previously stored on a mass storage device, such as a cassette recorder or a disk drive.)

Creating Your File Structure

You are now ready to begin setting up your Mailing List File. This section explains how to set up a file structure for a typical mailing list. The following section shows how to enter information into your file and then uses the data to explore some of the features of the module.

Naming Your File

The computer prompts you for the entries needed to create your own file. First, you are asked to name the file so that you can easily locate and use it at other times.



CREATE A FILE

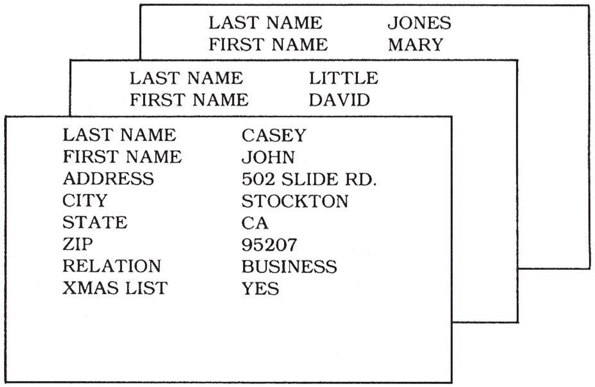
FILE NAME? –

You may use up to nine characters to name your file. For this example, type MAIL LIST and press **ENTER**.

Planning Your File

The first step in creating any filing system is deciding how the file should be organized, the major categories that should be included, and the amount of space available for the file.

The Personal Record Keeping module organizes information into groups called *pages*. It may help to visualize your file as a book containing a series of numbered pages with a set of categories listed in the same order on each page. These categories are called *items*.



LAST NAME	JONES
FIRST NAME	MARY

LAST NAME	LITTLE
FIRST NAME	DAVID

LAST NAME	CASEY
FIRST NAME	JOHN
ADDRESS	502 SLIDE RD.
CITY	STOCKTON
STATE	CA
ZIP	95207
RELATION	BUSINESS
XMAS LIST	YES

Each page is one full set of item categories in your file. For example, all the information relating to one person makes up one page in the Mailing List example. The number of pages available for a file is determined by the number of categories (items), the length of each item entry, and the amount of memory in the computer.

Let's say the following is a list of friends, relatives, and business associates that you want to organize into a mailing list file:

Page (1)
Mary Jones
2710 Wayne Ave.
Atlanta, GA 30341
F (friend)
Y (on Christmas list)

Page (2)
David Little
1212 44th St.
Lubbock, TX 79405
R (relative)
Y (on Christmas list)

Page (3)
John Casey
502 Slide Rd.
Stockton, CA 95207
B (business)
Y (on Christmas list)

Page (4)
Gene Martin
265 Salem St.
Waltham, MA 02154
R (relative)
N (not on Christmas list)

Page (5)
Jose Madrid
2010 Indiana
Denver, CO 80231
B (business)
N (not on Christmas list)

In reviewing the data and the way it will be used, you determine that these categories will be included in the file:

1. Last Name
2. First Name
3. Street Address
4. City
5. State
6. Zip Code
7. A friend, relative, or business category
8. A Christmas card category
9. Future expansion category 1
10. Future expansion category 2

Naming and Defining Items

As you set up a file, each category (item) on a page must be given a name so that you can easily identify each item. For instance, the item name for an individual's last name in the Mailing List file could be LAST NAME. This can be abbreviated to L NAME.

Note: Once your data file structure has been defined, new item names cannot be added; thus, it's a good practice to include extra item names in the data file for future expansion. You can, however, add new pages of data as long as memory space is available.

In addition to being "named," each item must also be defined by its type and length. The computer prompts you, one item at a time, for the item name, the item type, and the item length.

Item Name — When the prompt, ITEM NAME? is on the screen, type the name for that item and press **ENTER**. Item names can be up to nine characters long. Keep in mind that abbreviations can be used to save space.

Item Type — Next, the computer prompts for ITEM TYPE, displaying a list of the four available types. For each item in the file you must tell the computer the kind of data to be entered by selecting the Item Type from the list shown on the screen.

1. CHARACTERS — These are alphanumeric entries such as names and addresses. Any numbers entered in this category cannot be used in mathematical operations. If you wish to define the last variable in a file as CHARACTER-type, be sure to assign it a length of 2 to 15 characters. If this should happen, your data may be changed or lost. *Note*: If the last item on a page is a CHARACTER-type, it *must* have a length greater than one (1). Also, when editing your data, do not press **BACK** unless you are certain that the cursor is not positioned on an item immediately following a CHARACTER-type item with a length of one.

2. INTEGER — These entries are whole numbers with no decimal point. (*Note*: If you have defined an item as an integer, the computer will not accept a zero as the first digit.)
3. DECIMAL — These entries are numbers with a decimal point, such as dollars and cents.
4. SCIENTIFIC NOTATION — Scientific notation is used for the entry of very large or very small numbers (entries that exceed the maximum number of digits allowed in the other two number fields). For example, the number 12345600000 would be entered in scientific notation as:

$$\underbrace{1.23456}_{\textit{base number (mantissa)}}\mathrm{E}\underbrace{10}_{\textit{exponent of 10}}$$

See the sections on scientific notation in *Beginner's BASIC* and the *User's Reference Guide* for a more complete discussion.

Note: The only item types that can be used in mathematical and statistical operations are Integers, Decimals, or Scientific Notation.

Item Length — The prompt, MAX#CHARACTERS, asks you to define the number of characters or digits for each item. The length you specify for each item is determined by the longest entry you expect to have for that item. You may want to allow extra space for future entries that may be longer. The following chart lists the maximum lengths that are available for use. The length of each entry affects the number of pages available, so you may want to use abbreviations to conserve memory.

	MAXIMUM LENGTH
FILE NAMES	9
ITEM NAMES	9
CHARACTERS	15
INTEGER	10
DECIMAL	11 with decimal point
SCIENTIFIC NOTATION	5 decimal places (13 total)

Entering File Items

You are now ready to begin setting up the MAIL LIST file. As the computer prompts you, enter the following information to establish the MAIL LIST file structure.

Item	*Prompt*	*Input*
1	ITEM NAME	L NAME
	ITEM TYPE	1
	MAX# CHARACTERS	12
2	ITEM NAME	F NAME
	ITEM TYPE	1
	MAX# CHARACTERS	8
3	ITEM NAME	ADDRESS
	ITEM TYPE	1
	MAX# CHARACTERS	15
4	ITEM NAME	CITY
	ITEM TYPE	1
	MAX# CHARACTERS	12
5	ITEM NAME	STATE
	ITEM TYPE	1
	MAX# CHARACTERS	2
6	ITEM NAME	ZIP
	ITEM TYPE	1
	MAX# CHARACTERS	5
7	ITEM NAME	RELATION
	ITEM TYPE	1
	MAX# CHARACTERS	1
8	ITEM NAME	XMAS
	ITEM TYPE	1
	MAX# CHARACTERS	1
9	ITEM NAME	FIELD A (extra category)
	ITEM TYPE	1
	MAX# CHARACTERS	6
10	ITEM NAME	FIELD B (extra category)
	ITEM TYPE	2
	MAX# DIGITS	7

Reviewing Your File Structure

Now you have entered all the items that make up the file structure. Press **SHIFT Z (BACK)** to review the structure of the file before you actually enter the information from your mailing list. All of the items are displayed so that you can check for errors.

```
              FILE STRUCTURE
   ITEM              TYPE   WIDTH   DEC
  1 L NAME           CHAR    15      0
  2 F NAME           CHAR     8      0
  3 ADDRESS          CHAR    15      0
  4 CITY             CHAR    12      0
  5 STATE            CHAR     2      0
  6 ZIP              CHAR     5      0
  7 RELATION         CHAR     1      0
  8 XMAS             CHAR     1      0
  9 FIELD A          CHAR     6      0
 10 FIELD B           INT     7      0

  CORRECT (Y OR N)?
```

Note: The DEC (decimal) column shows zeros because the two item types you have used, "CHARACTERS" and "INTEGER," do not have decimal places.

The number of available pages is shown at the bottom of the display. To make sure that your file will not be too large to load back into the computer's memory, reduce the number of available pages by 2%. For example, if the module indicates that the number of available pages is 100, enter 98 pages of information, since 100 – (.02 × 100) = 98.

The computer asks if the information is correct (Y or N). If the information is not correct or you want to make changes, press **N**, and the computer asks, "WHICH ITEM DO YOU WISH TO CHANGE?" Press the number key for the item you want to change. For this example, press **1** to see the item name, item type, and item length for Item 1.

The cursor is positioned over the first character of the Item Name. If you want to change the item name, make the correction and press **ENTER**. If this entry does not need to be changed, just press **ENTER**. The cursor disappears. For Item Type, press the number for the desired type (even if it remains the same). The cursor now reappears over the first digit following "MAX #CHARACTERS." Type the new length and press **ENTER** (or just press **ENTER** if this entry is correct). The display returns to the File Structure screen to let you change other items. This is the last chance you'll have to change the file structure, so be sure to make all necessary changes at this time. When the data is correct, press **Y** and the MAIN INDEX appears.

```
                 MAIN INDEX

   PRESS TO
     1    SEE FILE STRUCTURE
     2    ADD PAGES
     3    DISPLAY PAGES
     4    CHANGE PAGES
     5    ANALYZE PAGES
     6    PRINT PAGES OR REPORT
     7    SAVE DATA FILE
     8    EXIT
```

Entering Data

Now that the file structure is set up, it's time to enter the information into the file. This section shows you how to enter the information, page by page, from the list of friends, relatives, and business associates.

To begin, press **2** to select ADD PAGES, the second option on the MAIN INDEX.

The computer then prompts you through the data entry for Page 1. Notice that these pages are automatically numbered for you.

PROMPT: L NAME (Identify the last name of the person on page 1.)
INPUT: Type JONES and press **ENTER**.
PROMPT: F NAME (Give the first name of the person on page 1.)
INPUT: Type MARY and press **ENTER**.

The computer continues to prompt you until all the information from Page 1 has been entered. The following chart shows the remaining information for Page 1. Press **ENTER** after typing each entry.

Prompt	*Input*
ADDRESS	2710 WAYNE AVE.
CITY	ATLANTA
STATE	GA
ZIP	30341
RELATION	F
XMAS	Y
FIELD A	Press **ENTER**
FIELD B	Press **ENTER**

(*Note*: FIELD A and FIELD B are for future expansion of your file. Don't type anything now; just press **ENTER** to go on to the next step.)

After you have entered all the data for page 1, the computer prompts you for the data for page 2. Continue this procedure until the information from all five pages has been entered into the computer. (See page 12 for the mailing list.) Then press **SHIFT Z (BACK)**, and the MAIN INDEX appears.

Displaying Data

To check for errors, display the data you have just entered by selecting DISPLAY PAGES (option 3 on the MAIN INDEX). The computer asks for PAGE #. Press **1** and **ENTER**, and your first page of information is displayed.

If you are not sure which page you want to check, press **SHIFT A (AID)**, which allows you to search through your file for a particular page by selecting a specific item, such as L NAME.

To review the pages, press **SHIFT V (PROC'D)**. When you press **SHIFT V (PROC'D)**, an option message appears at the bottom of the display. You can press **SHIFT ↑ (UP)** to see the next page or **SHIFT ↓ (DOWN)** to review the previous page.

After viewing the pages and checking for mistakes, press **SHIFT Z (BACK)** to return to the MAIN INDEX.

Changing and Correcting Data

This section illustrates correcting errors and/or changing data in your file. As an example, try changing the zip code on your first page. Select CHANGE PAGES (option 4 on the MAIN INDEX) to make a change or correction. The CHANGE PAGES selection list is then displayed. Since you want to change an entry, press **1** for CHANGE A PAGE. (You would select this same option to make a correction.)

The computer prompts you for the PAGE# on which the change or correction is to be made. You are making a change on the first page of your data, so press **1**, and then press **ENTER**.

All items for page 1 are then displayed with the cursor positioned by the first item. Press **ENTER** until the cursor moves to the ZIP item, type in a new zip code (73281 for example) and press **ENTER**. Then press **SHIFT Z (BACK)** twice to return to the MAIN INDEX.

Deleting A Page

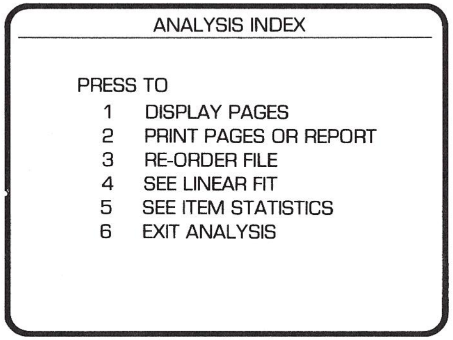
You can keep your file current by deleting pages no longer needed. From the MAIN INDEX, select CHANGE PAGES by pressing **4**. When the CHANGE PAGES selection screen appears, press **3** for DELETE A PAGE. The computer asks for the number of the page you want to delete. For this example, press **5** and then press **ENTER**. The computer checks before it deletes the page by asking "ARE YOU SURE (Y or N)?!" This time, press **N** for "no."

When a page is deleted, the computer automatically renumbers the remaining pages. Press **SHIFT Z (BACK)** to return to the MAIN INDEX.

Rearranging A File

At this point, you have set up a file, entered and displayed five pages of information, changed data on one page, and seen how to delete a page. Now you can manipulate your data file. For example, to arrange the mailing list in alphabetical order, press **5** (ANALYZE DATA) while the MAIN INDEX is on the screen.

To alphabetize all the pages in your file, press **1** (ANALYZE ALL PAGES). The ANALYSIS INDEX is then displayed.



```
              ANALYSIS INDEX

     PRESS TO
       1   DISPLAY PAGES
       2   PRINT PAGES OR REPORT
       3   RE-ORDER FILE
       4   SEE LINEAR FIT
       5   SEE ITEM STATISTICS
       6   EXIT ANALYSIS
```

Alphabetizing a file is the same as rearranging the order of the data, so press **3** (RE-ORDER FILE). All of the item names are displayed with a number to the left. To alphabetize the list by last names, press **1** (the item number for last names). Specify ascending order to get the familiar A-Z results by pressing **1**. (For descending order, press **2**.)

To rearrange the file according to a different item, press the number listed beside the item name.

A long list may require a noticeable time to sort. The message SORTING — PLEASE STAND BY appears. Then the display automatically returns to the ANALYSIS INDEX.

Display the rearranged list by pressing **1** (DISPLAY PAGES). The computer prompts you for the PAGE#. To display the first page on the list, press **1**. After viewing all the pages, press **SHIFT Z (BACK)** to return to the ANALYSIS INDEX. Then press **6** (EXIT ANALYSIS) to return to the MAIN INDEX.

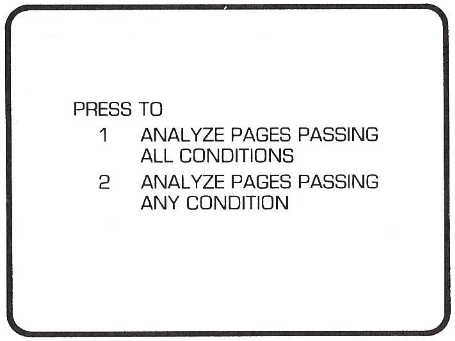
Selecting Subsets

You can also tell the computer to sort a file into certain subsets. You may want a list of all the people on your mailing list who live in a certain town, or you may want a separate display of those on your Christmas list.

To define a subset, again select ANALYZE PAGES, option 5 on the MAIN INDEX. The ANALYZE PAGES selection list appears. Press **2** to ANALYZE SELECTED PAGES. Next, you define the criteria for the subset. All of the item names are displayed with a number to the left. To organize your file by those on your Christmas list, press **8** and **ENTER**. A message asks you for "low value" and "high value." Since you only want to display those that *are* on your Christmas list, type Y (yes) for both "low value" and "high value" pressing **ENTER** each time. (If you wanted to analyze the information relating to those people whose last names are from A to L, you would type A for "low value" and L for "high value.")

The computer sorts the file according to your directions and then returns to the ANALYSIS INDEX. To see the subset, press **1** to DISPLAY PAGES. The computer prompts you for the PAGE#. To display the first page on the list, press **1**. After viewing all the pages in the subset, press **SHIFT Z (BACK)** to return to the ANALYSIS INDEX. Then press **6** (EXIT ANALYSIS) to return to the MAIN INDEX. (*Note*: When a subset is selected, those pages are automatically moved to the front of your file. The first page of the subset becomes the first page of the file.)

If you indicate more than one item as a selection criteria, you see the following display:



```
PRESS TO
  1    ANALYZE PAGES PASSING
       ALL CONDITIONS
  2    ANALYZE PAGES PASSING
       ANY CONDITION
```

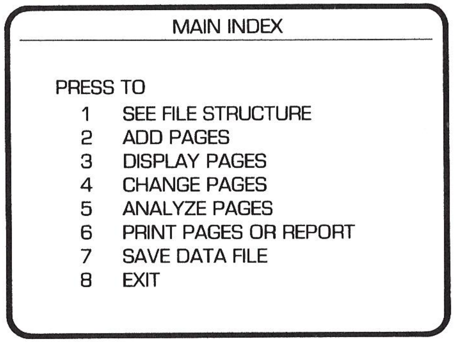
After the computer analyzes the data, it returns to the ANALYSIS INDEX. Again press **1** (DISPLAY PAGES) to view the subset.

MODULE ORGANIZATION

The Personal Record Keeping Command Module is organized so that you can quickly access all of its capabilities.

Main Index

The MAIN INDEX is the pivotal point of the module. After you have created a file or loaded a file from a mass storage device, you choose each module function from this index.



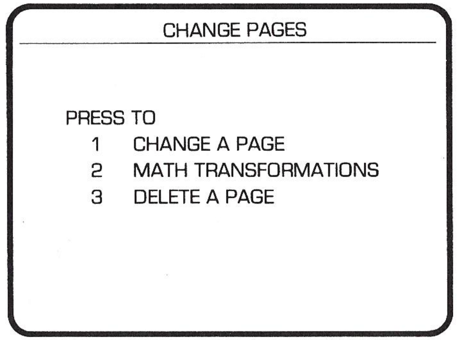
```
              MAIN INDEX
PRESS TO
  1    SEE FILE STRUCTURE
  2    ADD PAGES
  3    DISPLAY PAGES
  4    CHANGE PAGES
  5    ANALYZE PAGES
  6    PRINT PAGES OR REPORT
  7    SAVE DATA FILE
  8    EXIT
```

Each time you complete your work in a section, you return to the MAIN INDEX to make additional selections.

Two major sections of the module, (4) CHANGE PAGES and (5) ANALYZE PAGES, let you manipulate the data in your file in various ways.

Change Pages

The CHANGE PAGES section lets you change the data in your file. You have three options on the CHANGE PAGES index.



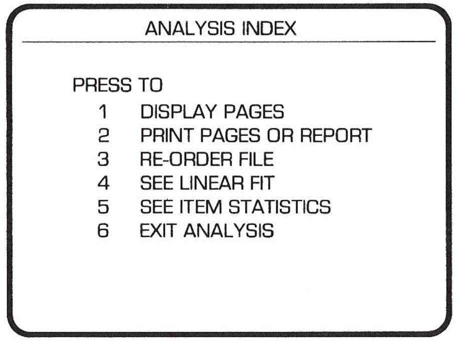
CHANGE PAGES

PRESS TO
1 CHANGE A PAGE
2 MATH TRANSFORMATIONS
3 DELETE A PAGE

You can change or correct the information in your file, perform mathematical transformations on file items, or delete a page from the file. With any of these options, you alter the information in the file.

Analyze Pages

In this section, you can analyze the entire file or a selected subset of the file. After pressing **5** (ANALYZE PAGES), indicate whether you want to analyze the entire file (all pages) or select a subset (analyze selected pages).



ANALYSIS INDEX

PRESS TO
1 DISPLAY PAGES
2 PRINT PAGES OR REPORT
3 RE-ORDER FILE
4 SEE LINEAR FIT
5 SEE ITEM STATISTICS
6 EXIT ANALYSIS

Option 3 (RE-ORDER FILE) rearranges the file; the main file is not altered by any of the other analysis options.

Two options on this list, DISPLAY PAGES and PRINT PAGES OR REPORT, seem to duplicate functions from the MAIN INDEX. However, these choices apply only to the subset selected for analysis. (If you selected "ANALYZE ALL PAGES," these options are applied to the entire file.)

MATH TRANSFORMATIONS

The Personal Record Keeping module can perform mathematical calculations with items in your file. Eighteen formulas for transforming data are built into the module. You simply select the formula you want to use and enter the desired items or values as the computer prompts you.

ITEM TRANSFORMATIONS

1. A = B
2. A = B + C
3. A = B − C
4. A = B × C
5. A = B / C
6. A = B^C
7. A = ABS(B)
8. A = LOG10(B)
9. A = LOGE(B)
10. A = EXP(B)
11. A = ATAN(B)
12. A = TAN(B)
13. A = SIN(B)
14. A = COS(B)
15. A = INT(B)
16. A = SGN(B)
17. A = PI
18. A = RND

(See the *User's Reference Guide* for a discussion of these functions.)

Note: These transformations do actually change your data. If you want to keep a record of your original data, be sure to save the information on a mass storage device *before* performing math transformations. The original data then can be loaded back into the computer's memory when you wish to use it again.

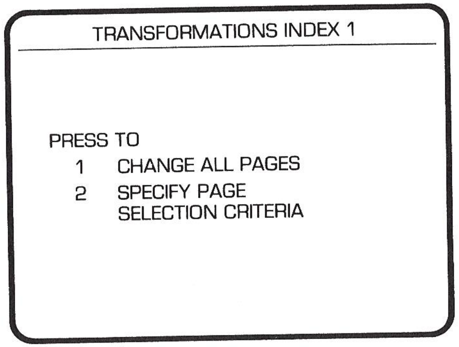
Averaging students' grades is a typical application calling for a math transformation. By using the Personal Record Keeping module as a grade book, a teacher can simplify maintaining records and averaging grades.

The following information is recorded in a teacher's grade book.

Grade Book

NAME	TEST 1	TEST 2	AVE
DOE	92	85	
JONES	98	63	
SMITH	87	82	

Set up the file by the same procedure illustrated in the MAIL LIST example, and use the Math Transformations option to find the grade averages. After the file is established, select CHANGE PAGES, option 4 on the MAIN INDEX. Then press **2** to see TRANSFORMATIONS INDEX 1.



TRANSFORMATIONS INDEX 1

PRESS TO
1 CHANGE ALL PAGES
2 SPECIFY PAGE SELECTION CRITERIA

Press **1** to average the grades of all the students. The next display shows the list of possible transformations and asks "WHAT TRANSFORMATION?"

To determine the average grade, you use the formula:

AVE = (TEST 1 + TEST 2)/2

The Personal Record Keeping module requires a two step procedure to set up this formula. First, let

AVE = TEST 1 + TEST 2

Then, substitute AVE for TEST 1 + TEST 2 and establish the formula

AVE = AVE/2

Look at the list of transformations. The first formula (AVE = TEST 1 + TEST 2) can be represented by A = B + C, which is number 2 on the list. Press **2** to select this formula. Then press **ENTER**.

The next display shows a numbered list of your items.

1 NAME
2 TEST 1
3 TEST 2
4 AVE

The computer prompts you to enter the desired values as follows:

PROMPT:	1. A = B + C WHICH ITEM IS A?
INPUT:	Type **4** and press **ENTER** (This defines AVE as A.)
PROMPT:	IS B A CONSTANT (Y or N)?
INPUT:	Type **N** since B (TEST 1) is not a constant.
PROMPT:	WHICH ITEM IS B?
INPUT:	Type **2** (TEST 1 from the list on the screen) and press **ENTER**.
PROMPT:	IS C A CONSTANT (Y or N)?
INPUT:	Type **N** since C (TEST 2) is not a constant.
PROMPT:	WHICH IS ITEM C?
INPUT:	Type **3** (TEST 2 from the list on the screen) and press **ENTER**.

The display now shows

```
AVE =
TEST 1 + TEST 2
CORRECT (Y or N)?
```

Press **Y** (yes) since this is the correct formula. The first transformation is set up. To complete the procedure you must select the second transformation:

AVE = AVE/2

The second formula (AVE = AVE/2) can be represented by A = B/C. When the computer again shows the list and asks "WHAT TRANSFORMATION?" press **5** (A = B/C), and then press **ENTER**. Once more, the computer shows the numbered item list and prompts you for the values.

PROMPT: 2. A = B/C
WHICH ITEM IS A?
INPUT: Type **4** (AVE from the numbered list) and press **ENTER**.
PROMPT: IS B A CONSTANT (Y or N)?
INPUT: TYPE **N**
PROMPT: WHICH ITEM IS B?
INPUT: Type **4** and press **ENTER**. (This substitutes AVE for TEST 1 + TEST 2)
PROMPT: IS C A CONSTANT (Y or N)?
INPUT: Type **Y** (This time, C is constant, 2)
PROMPT: VALUE OF C?
INPUT: Type **2** and press **ENTER**.

The display shows the formula and asks if it is correct:

```
AVE =
AVE/2
CORRECT (Y or N)?
```

Type Y, and the computer shows the list and asks "WHAT TRANSFORMATION?" Since you have completed the desired operations, press **SHIFT Z (BACK)**. The TRANSFORMATION 3 INDEX appears:

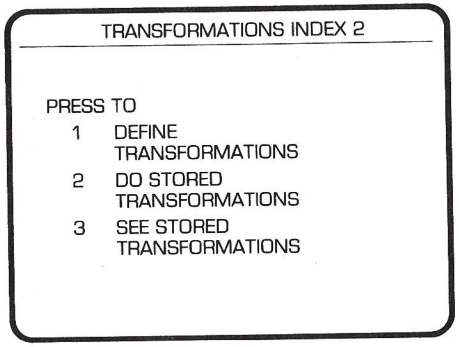
```
TRANSFORMATIONS INDEX 3

PRESS TO
  1  SEE TRANSFORMATIONS
  2  DO TRANSFORMATIONS
  3  STORE TRANSFORMATIONS
  4  STORE AND DO
     TRANSFORMATIONS
```

If you press **1**, the computer displays the transformations you have set up. Pressing **2** directs the computer to calculate the transformations. The results are stored in your file, but the current equations are not stored. (Any transformations defined and stored previously remain stored.) Pressing **3** stores only the transformations; no calculations are performed. Any previously stored transformations are erased. Pressing **4** tells the computer to calculate and store the transformations and the results.

Press **4** to STORE AND DO TRANSFORMATIONS. The screen displays the message UPDATING — PLEASE STAND BY while the average score for each student is computed and stored. When this is complete, you again see the MAIN INDEX. To see the results of your transformations, press **3**, DISPLAY PAGES. When finished, press **SHIFT Z (BACK)** to return to the MAIN INDEX.

If you have previously stored transformations, the following screen is displayed before you see the list of possible transformations.



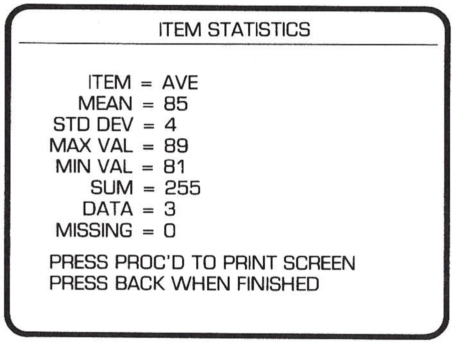
```
      TRANSFORMATIONS INDEX 2

PRESS TO
  1    DEFINE
       TRANSFORMATIONS
  2    DO STORED
       TRANSFORMATIONS
  3    SEE STORED
       TRANSFORMATIONS
```

If you press **1**, the list of transformations is displayed. Pressing **2** directs the computer to calculate the stored transformations. When you press **3**, the computer displays the stored transformations.

ITEM STATISTICS

The Personal Record Keeping Command Module will also automatically evaluate common statistics. For example, if you want to see the class average for the data set above, select **5** (ANALYZE PAGES) from the Main Index. Then press **1** to ANALYZE ALL PAGES. When the ANALYSIS INDEX is displayed, press **5** for ITEM STATISTICS. Then indicate you want to evaluate AVE by pressing **4** and **ENTER**. You will then see the class average (MEAN) and other statistical results.



```
          ITEM STATISTICS

      ITEM = AVE
      MEAN = 85
   STD DEV = 4
   MAX VAL = 89
   MIN VAL = 81
       SUM = 255
      DATA = 3
   MISSING = 0

PRESS PROC'D TO PRINT SCREEN
PRESS BACK WHEN FINISHED
```

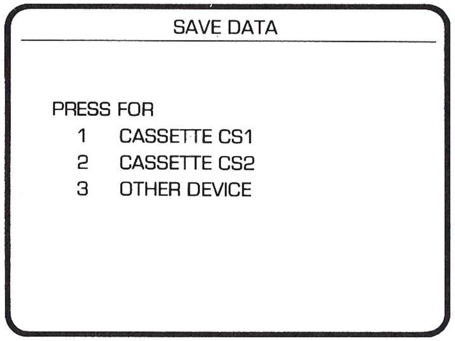
Then press **SHIFT Z (BACK)** until the MAIN INDEX appears.

STORING AND LOADING DATA

If you want to use the information in the file at a future time, you must store it on a mass storage device before removing the Personal Record Keeping Module, pressing **SHIFT Q** to return to the master title screen, or turning the computer OFF. Make sure the device is attached to your Home Computer.

Storing Data

To store data, press **7** to select SAVE DATA (option seven on the MAIN INDEX). The screen shows these choices for saving data.



```
             SAVE DATA

PRESS FOR
  1    CASSETTE CS1
  2    CASSETTE CS2
  3    OTHER DEVICE
```

If you have a cassette recorder attached and want to store this data, press **1** for CASSETTE UNIT CS1. The computer gives step-by-step instructions for saving data. When you are through, the computer tells you to label the tape. You can then press **SHIFT V (PROC'D)** to print the screen or press **ENTER** to continue. If you press **ENTER**, the computer asks if you are ready to end the session. Press **Y** for "yes."

To save data using the Texas Instruments Disk Memory Drive, select OTHER DEVICE, option 3 on the SAVE DATA list. The computer prompts you for the device name. Type DSK1, DSK2, or DSK3 depending upon the disk drive you are using. The computer then prompts for the FILE NAME. Type in the name of the disk drive you are using, a period, and the name that you have assigned to the file; for example, DSK1.ADDRESSES. Then press **ENTER**. The computer stores the file information on the disk you have specified.

Loading Data

At times you'll want to work with a file you've previously set up and saved on a mass storage device. To load a file:

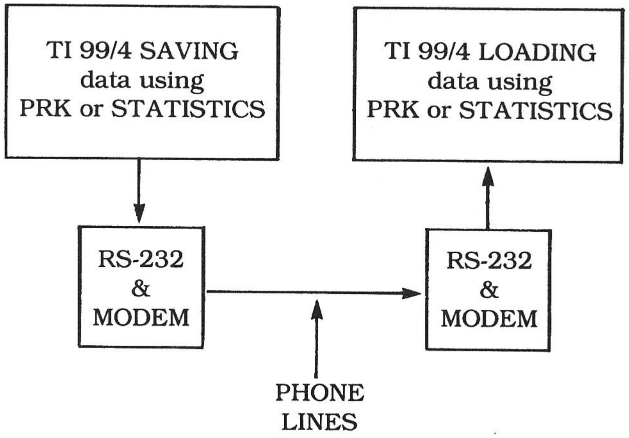
1) Attach the mass storage device to the computer.
2) Insert the Personal Record Keeping module and select PERSONAL RECORDS.
3) Date the file when prompted.
4) Indicate whether or not you are using a printing device.
5) When the DEFINE A FILE screen appears, press **2** (LOAD A FILE).
6) Follow the step-by-step directions the computer gives for loading the file.

When the loading is complete, press **ENTER**. The display shows the name and date for the file just loaded. You now can press **SHIFT V (PROC'D)** to print the screen, press **ENTER** to continue, or press **SHIFT Z (BACK)** to reload the data. Press **ENTER**, and the computer returns to the Main Index.

See the *User's Reference Guide* for a complete discussion of saving and loading using a cassette recorder.

TRANSMITTING DATA FILES

Data files can be transmitted from one Home Computer to another via the Texas Instruments RS232 Interface and the Texas Instruments Telephone Coupler (Modem). Both computers must have Personal Record Keeping (or Statistics) modules plugged into the consoles. The following arrangement is necessary for transmission:



Files can be transmitted using this procedure:

1. Set up your file as illustrated in the MAIL LIST example.
2. Select SAVE DATA FILE, option 7 on the MAIN INDEX. The screen shows these choices for saving data.

   1 CASSETTE CS1
   2 CASSETTE CS2
   3 OTHER DEVICE

   Press **3** (OTHER DEVICE).
3. When you are asked "FILE NAME?," type **RS232**. DO NOT PRESS **ENTER**.

4. Call the other user. (See the modem manual for specific instructions.) The other user plugs in the Personal Record Keeping module or the Statistics module and selects "LOAD A FILE," designating RS232 as the device. (DO NOT PRESS **ENTER**.)
5. Both parties place the telephone receivers on the modems, and both press **ENTER**.
6. The number 255 then appears at the top center of each screen. Once the link is established, this value is replaced by the remaining number of 256-character records to be exchanged. The value decreases as each record is transferred. When it reaches zero, the complete file has been transmitted.
7. Do not remove the telephone receivers from the modems until the computer sending (saving) the file displays "LABEL TAPE" or the computer receiving (loading) the data displays "FILE LOADED."
8. For more details, see the RS232 manual.

OBTAINING PRINTED COPY

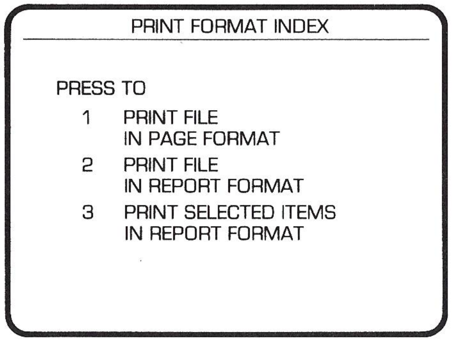
With the optional TI Solid State Thermal Printer attached (or any other printer connected to your Home Computer via the RS232 Interface), you can obtain a printed copy of your file or of the data displayed on the screen. Attach the printer following the directions in the manual that accompanies it.

As you begin working with the Personal Record Keeping Command Module, you are asked if a printing device will be used. If a printer is attached, press **Y** for "yes." The computer then asks for the device name. Type **TP** and press **ENTER** to identify the Thermal Printer. (If a printer is attached via the RS232 Interface, check the RS232 owner's manual for instructions.)

For a printed copy of the elements in your file, press **6** to select the PRINT PAGES OR REPORT option on the MAIN INDEX. You are asked the following questions:

1) NAME OF DEVICE? — Type the name or designation for the printer you're using. For instance, type **TP** for Thermal Printer and press **ENTER**. (If the name is already displayed, just press **ENTER**.)
2) WIDTH? — Since the Thermal Printer is a 32 column printer, type **32** and press **ENTER**. For other printers, type the correct number of columns, the maximum width being 80 columns.
3) TITLE? — Type the title you want to give the printout. For example, if you were printing the Grade Book file demonstrated earlier, you would type GRADES and press **ENTER**. (This refers to the teacher's grade book file entered in the previous example.)

The next screen gives you three format options:



```
PRINT FORMAT INDEX

PRESS TO
  1  PRINT FILE
     IN PAGE FORMAT
  2  PRINT FILE
     IN REPORT FORMAT
  3  PRINT SELECTED ITEMS
     IN REPORT FORMAT
```

Print Pages

Option 1 prints the file page by page. Press **1**. The display shows "PRINTING HOLD DOWN ANY KEY TO STOP" while the printer prints:

```
FILE:  GRADES
DATE:  2/12/80
TITLE: GRADES

PAGE #         1
------         -
 1.NAME        DOE
 2.TEST 1      92
 3.TEST 2      85
 4.AVE         89

PAGE #         2
------         -
 1.NAME        JONES
 2.TEST 1      98
 3.TEST 2      63
 4.AVE         81

PAGE #         3
------         -
 1.NAME        SMITH
 2.TEST 1      87
 3.TEST 2      82
 4.AVE         85
```

Print in Report Format

Option 2 prints your file in a *report* format. A report is a summary of the pages in a file. Each line of a report is a page of your file with items listed from left to right. Pressing **2** tells the printer to print your file as follows:

```
FILE:  GRADES
DATE:  2/12/80
TITLE: GRADES

  INDEX
  0 = PAGE #
  1 = NAME
  2 = TEST 1
  3 = TEST 2
  4 = AVE


0    1     2   3   4
- ------- --- --- ---
1 DOE      92  85  89
2 JONES    98  63  81
3 SMITH    87  82  85
```

Print Selected Items

Option 3 allows you to designate only certain items from your file for printing. Press **3** and then select the desired items. In this example select item 1 and press **ENTER** and item 4 and press **ENTER**. When all desired items are selected, press **SHIFT Z (BACK)**. This is the information printed:

```
FILE:  GRADES
DATE:  2/12/80
TITLE: GRADES

  INDEX
  0 = PAGE #
  1 = NAME
  2 = TEST 1
  3 = TEST 2
  4 = AVE


0    1       4

_ _______  ___
1 DOE       89
2 JONES     81
3 SMITH     85
```

Print Screen Display

At times, you may want to print data displayed on the screen. When the information you want to print is on the screen, press **SHIFT V (PROC'D)**. Option messages are displayed at the bottom of the screen. Press **P** to print the data on the screen.

FILE STRUCTURE AND MEMORY

The number of pages in a file is limited by the number of items, the length of each item, and the amount of available memory. Before you begin setting up your file, analyze your data to determine the item name, the item type and the item length of each data category. Try to structure the file so that you do not exceed the memory capacity of your computer. Keep in mind that abbreviations help conserve memory.

COMMON APPLICATIONS

The Personal Record Keeping module is a flexible tool designed for use in a variety of situations. This section lists several application ideas which may be helpful to you in planning your own files.

Small Library Management

The Personal Record Keeping Command Module is well suited to small library management. Books can be grouped into user-defined categories. You can then select subsets, such as all the books about children published after 1970, produce statistical reports, or perform any of the functions contained in the module.

EXAMPLE:

Item Names	*Page 1*	*Page 2*
AUTHOR	FORD M	HILL K
TITLE	ADOLESCENCE A	CHILDREN AND
TITLE	TIME OF GROWTH	THEIR IMPACTS
PUBLISHER	MCGRAW-HILL	WILEY
DATE	1973	1974
SUBJECT 1	BEHAVIOR	CHILDREN
SUBJECT 2	PSYCHOLOGY	PSYCHOLOGY
SUBJECT 3	CHILDREN	BEHAVIOR
ISBN#	8-12384-610-2	7-01284-193-5
LIB CONG#	73-01839	74-16351
PRICE	12.95	15.95

Household Inventory

One file application is an inventory of household goods. The serial number, purchase price, and depreciated value are useful for insurance and tax purposes. The computer can automatically update the file by calculating the current depreciated value of contents.

An example of item names and sample data pages is shown below.

EXAMPLE:

Item Names	*Page 1*	*Page 2*
DATE	9/79	10/10/78
ITEM	TV	TABLE
MODEL	5A	200
PUR DATE	10/10/75	8/6/76
PUR PRICE	645.00	400.00
FROM	XYZ VIDEO	ACE FURN
SER#	S965783	N/A
DEP/YR	.10	.10
VALUE	451.50	280.00
LOCATION	LR	DIN RM
YRS DEP	3	3

Stock Accounts

The Personal Record Keeping module can be used to help you keep track of stock accounts. The calculation features of the module can show the current financial status of several stocks, given the current price (CUR PRIC) as an input. Also, by arranging the stocks according to NET VAL you can list the most profitable stocks in order of profit on a given date. You can rearrange your file to meet particular needs.

EXAMPLE:

Item Names	*Page 1*	*Page 2*
DATE	9/4/79	9/17/79
COMPANY	XYZ OIL	ABC COAL
CERT#	1234 ABC	1934 A
PUR DATE	10/10/77	8/16/74
PUR PRICE	39.00	22.00
# SHARES	100	200
TOT COST	3900	4400
CUR PRIC	34.00	32.00
TOT VAL	3400	6400
NET VAL	–500	2000
TERM	SHORT	LONG
DIV YTD	340	543

Teacher's Grade Book

Teachers can use the Personal Record Keeping module to file students' grades and calculate averages through the Math Transformations options. The file can be reordered to rank students according to a single test grade or the average of all grades. For example, each student's course grade could be computed using the following transformation.

COURSE GRADE = (AVE GRADE ON QUIZES + MIDTERM + FINAL EXAM)/3

EXAMPLE:

Item Name	*Page 1*	*Page 2*
CLASS	HISTORY	HISTORY
STUDENT	TRIMMER	HUGHS
QUIZ #1	75	63
QUIZ #2	80	45
QUIZ #3	90	77
QUIZ #4	100	75
MID TERM	87	74
QUIZ #5	77	75
QUIZ #6	95	81
QUIZ #7	100	65
QUIZ #8	100	69
FINAL EX	88	62
QUIZ AVE	90	69
FINAL GRA	88	68

Payroll Worksheet

You can set up a file to manage a small payroll. Each employee record can be updated periodically with Hours, Federal Withholding, State Withholding and Social Security. The computer can calculate Gross pay and year-to-date totals through the Math Transformations.

EXAMPLE

Item Name	*Page 1*	*Page 2*
DATE	9/7/79	9/7/79
NAME	SMITH, H.	WILLIS, M
ADDRESS	45 AVE. Q	1051 71 ST.
PHONE	794-3244	795-3217
PAY RATE	4.00	5.50
HOURS	40	35.0
GROSS PAY	160.00	192.50
FED WH	30.00	50.00
STATE WH	6.50	9.50
SOC SEC	9.00	14.00
NET PAY	114.50	119.00
FED YTD	600.79	900.00
ST YTD	128.00	86.00
SS YTD	86.00	252.00

Bowling League Scores

This application can be useful to the secretary of a bowling league. The secretary can keep track of individual bowling scores so that trophies can be awarded at the end of season. Trophies are given for the high single game, the high series, the most improved bowler, etc.

EXAMPLE:

Item Names	*Page 1*	*Page 2*
BOWLER	HARVEY, K	RISLEY, R
HIGH SING	224	197
LOW SING	121	98
START AVE	168	145
PRES AVE	172	155
HIGH SERI	510	455
LOW SERI	445	357
TEAM	A&B ROOF	HILK GROC
TOT PINS	2064	1860
GAMES TOT	12	12
HANDICAP	22	36
POINTS	9	3

STATISTICS MODULE COMPATIBILITY

The Statistics Command Module can add to the capability of your Personal Record Keeping module. Designed to provide you with a powerful time-saving tool for statistical analysis on large amounts of data, the Statistics Command Module includes:

- DESCRIPTIVE STATISTICS
  - — Mean, Standard Deviation
  - — One-way Frequency Tables
- CORRELATION
- LINEAR REGRESSION
- INFERENTIAL STATISTICS
  - — Tests for Matched Groups
  - — Tests for Independent Groups
  - — Analysis of Variance
- AND MORE

Data entered and saved by one of these modules can be loaded and used by the other. This compatibility expands the capabilities of both modules. Here's one example of how these modules complement each other.

A data file generated by the Statistics Command Module can be saved and then loaded into the computer to be alphabetized by the Personal Record Keeping Command Module. Or the Personal Record Keeping module can be used to print reports summarizing all observations (pages) at once. (The Statistics module can display and print only one observation at a time.)

In transferring data from one module to the other, there are some differences you should keep in mind. To ensure that you do not create a data file that is too large, any Personal Record Keeping file that you wish to analyze with the Statistics module must use less than 52% of the maximum number of pages in Personal Record Keeping. If necessary, you can eliminate these variables not required for the data analysis you want before loading the file Statistics.

The Statistics module permits up to 99 variables (items) for each observation (page), while the Personal Record Keeping module allows only 15 items per page. The terminology used by the two modules varies, as shown below:

Equivalent Terminology

Personal Records	*Statistics*
item	variable
page	observation
report	table

CARING FOR THE MODULE

These modules are durable devices, but they should be handled with the same care you would give any other piece of electronic equipment. Keep the module clean and dry, and don't touch the recessed contacts.

CAUTION

The contents of a Command Module can be damaged by static electricity discharges.

Static electricity build-ups are more likely to happen during the cold winter months (or in areas with very dry climates) when the natural moisture in the air is low. To avoid damaging the module, just touch any metal object (a doorknob, a desklamp, etc.) before handling the module. If static electricity is a problem where you live, you may want to buy a special carpet treatment that reduces static build-up. These commercial preparations are usually available from local hardware and office supply stores.

IN CASE OF DIFFICULTY

If the module activities do not appear to be operating properly return to the master title screen by pressing **SHIFT Q**. Withdraw the module, align it with the module opening, and reinsert it carefully. Then press any key to make the master selection list appear. Repeat the selection process. (*Note*: In some instances, it may be necessary to turn the computer off, wait several seconds, and then turn it on again.)

If the module is accidentally removed from the slot while the module contents are being used, the computer may behave erratically. To restore the computer to normal operation, turn the computer off, wait a few seconds, reinsert the module, and turn it on again.

If you have any difficulty with your computer or the Personal Record Keeping module, please contact the dealer from whom you purchased the unit and/or module for service directions.

Additional information concerning use and service can be found in your *User's Reference Guide*.

THREE-MONTH LIMITED WARRANTY
HOME COMPUTER SOFTWARE MODULE

Texas Instruments Incorporated extends this consumer warranty only to the original consumer purchaser.

WARRANTY COVERAGE

This warranty covers the electronic and case components of the software module. These components include all semiconductor chips and devices, plastics, boards, wiring and all other hardware contained in this module ("the Hardware"). This limited warranty does not extend to the programs contained in the software module and in the accompanying book materials ("the Programs").

The Hardware is warranted against malfunction due to defective materials or construction. **THIS WARRANTY IS VOID IF THE HARDWARE HAS BEEN DAMAGED BY ACCIDENT, UNREASONABLE USE, NEGLECT, IMPROPER SERVICE OR OTHER CAUSES NOT ARISING OUT OF DEFECTS IN MATERIALS OR WORKMANSHIP.**

WARRANTY DURATION

The Hardware is warranted for a period of three months from the date of the original purchase by the consumer.

WARRANTY DISCLAIMERS

ANY IMPLIED WARRANTIES ARISING OUT OF THIS SALE, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE ABOVE THREE-MONTH PERIOD. TEXAS INSTRUMENTS SHALL NOT BE LIABLE FOR LOSS OF USE OF THE HARDWARE OR OTHER INCIDENTAL OR CONSEQUENTIAL COSTS, EXPENSES, OR DAMAGES INCURRED BY THE CONSUMER OR ANY OTHER USER.

Some states do not allow the exclusion or limitation of implied warranties or consequential damages, so the above limitations or exclusions may not apply to you.

LEGAL REMEDIES

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

PERFORMANCE BY TI UNDER WARRANTY

During the above three-month warranty period, defective Hardware will be replaced when it is returned postage prepaid to a Texas Instruments Service Facility listed below. The replacement Hardware will be warranted for three months from date of replacement. Other than the postage requirement, no charge will be made for replacement.

Texas Instruments strongly recommends that you insure the package for value prior to mailing.

TEXAS INSTRUMENTS CONSUMER SERVICE FACILITIES

Texas Instruments Service Facility
P.O. Box 2500
Lubbock, Texas 79408

Geophysical Services Incorporated
41 Shelley Road
Richmond Hill, Ontario, Canada L4C5G4

Consumers in California and Oregon may contact the following Texas Instruments offices for additional assistance or information.

Texas Instruments Consumer Service
831 South Douglas Street
El Segundo, California 90245
(213)973-1803

Texas Instruments Consumer Service
10700 Southwest Beaverton Highway
Park Plaza West
Beaverton, Oregon 97005
(503)643-6758

IMPORTANT NOTICE OF DISCLAIMER REGARDING THE PROGRAMS

The following should be read and understood *before* purchasing and/or using the software module.

TI does not warrant that the Programs will be free from error or will meet the specific requirements of the consumer. The consumer assumes complete responsibility for any decision made or actions taken based on information obtained using the Programs. Any statements made concerning the utility of the Programs are not to be construed as express or implied warranties.

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